

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) A device for driving a PDP (plasma display panel) for arranging a plurality of scan electrodes and sustain electrodes in parallel for each display line, and arranging a plurality of address electrodes to be crossed with the scan electrodes and the sustain electrodes, the device comprising:

a first switch and a second switch coupled in series between a first voltage and a second voltage;

a capacitor coupled between a contact point of the first switch and the second switch and a third voltage;

a rising ramp switch for forming a constant current is coupled to the third voltage at a first end of the rising ramp switch; and

a main path switch coupled between the contact point of the first and second switches and second end of the rising ramp switch, for forming a constant current and for generating a falling ramp waveform which is a portion of a reset waveform,

wherein a current path for generating the falling ramp waveform includes the main path switch and the second switch, the second switch being a sustain unit switch.

2. (Original) The device of claim 1, wherein the first voltage is a sustain voltage, the second voltage is a ground voltage, and the third voltage is a voltage that is high enough that a sum of the third voltage and the first voltage may uniformly redistribute wall charges of respective cells of the PDP.

3. (Original) The device of claim 1, wherein the first and second switches, the rising ramp switch, and the main path switch are MOS transistors wherein each MOS transistor has a body diode.

4. (Original) The device of claim 1, wherein each of the rising ramp switch and the main path switch includes a MOS transistor having a gate and a drain between which a capacitor is coupled.

5. (Previously Presented) A method for driving a PDP (plasma display panel) for arranging a plurality of scan electrodes and sustain electrodes in parallel for each display line, and arranging a plurality of address electrodes to be crossed with the scan electrodes and the sustain electrodes, the method comprising:

charging, to a third voltage, a capacitor having a first end selectively coupled to a first voltage and a second voltage;

supplying the first voltage to the first end of the capacitor, and turning on a rising ramp switch for supplying a constant current to the scan electrode to make the potential of the scan electrode rise to the third voltage from the first voltage in a ramp waveform, the rising ramp switch being coupled between a second end of the capacitor and the scan electrode;

turning off the rising ramp switch, and supplying the second voltage to the first end of the capacitor to control the potential of the scan electrode to a fourth voltage; and

turning on a main path switch for supplying the constant current to the scan electrode to make the potential of the scan electrode gradually fall, the main path switch being coupled between the second voltage and the scan electrode,

wherein turning on the main path switch forms a current path including the main path switch and the second voltage, and generates a falling ramp waveform in the scan electrode, the second voltage being a sustain unit voltage.

6. (Original) The method of claim 5, wherein the first voltage is a sustain voltage, the second voltage is a ground voltage, the third voltage is a voltage high enough that the sum of the third voltage and the first voltage may uniformly redistribute wall charges of respective cells of the PDP, and the fourth voltage is the third voltage.

7. (Previously Presented) The method of claim 5, wherein charging, to a third voltage, a capacitor having a first end selectively coupled to a first voltage and a second voltage, comprises turning on a first switch coupled to the first voltage to supply the first voltage to the first end of the capacitor.

8. (Original) The method of claim 5, wherein supplying the first voltage to the first end of the capacitor, and turning on a rising ramp switch for supplying a constant current to the scan electrode to make the potential of the scan electrode rise to the third voltage from the first voltage in a ramp waveform comprises supplying the first voltage to the first end of the capacitor by having current flow through a charge and discharge unit coupled to a contact point of a first switch and a second switch coupled in series between the first voltage and the second voltage.

9. (Original) The method of claim 5, wherein turning off the rising ramp switch, and supplying the second voltage to the first end of the capacitor to control the potential of the scan electrode to a fourth voltage comprises turning on a second switch coupled to the second voltage to supply the second voltage to the first end of the capacitor.

10. (Original) The method of claim 5, wherein turning off the rising ramp switch, and supplying the second voltage to the first end of the capacitor to control the potential of the scan electrode to a fourth voltage comprises supplying the second voltage to the first end of the capacitor by having current flow through a charge and discharge unit coupled to a contact point of a first switch and a second switch coupled between the first voltage and the second voltage.

11. (Previously Presented) A plasma display panel (PDP), comprising:

- a first substrate and a second substrate;
- a plurality of scan electrodes and sustain electrodes arranged in pairs;
- a plurality of data electrodes arranged to be crossed with the scan electrodes and the sustain electrodes;
- a first switch and a second switch coupled in series between a first voltage and a second voltage;
- a capacitor coupled between a contact point of the first and second switches and a third voltage;
- a rising ramp switch coupled to the third voltage, for forming a constant current; and
- a main path switch coupled between the contact point of the first and second switches and another end of the rising ramp switch, for forming a constant current and for generating a falling ramp waveform which is a portion of a reset waveform,

wherein a current path for generating the falling ramp waveform includes the main path switch and the second switch, the second switch being a sustain unit switch.